

Appl. No. 09/941,096
Amtd. Dated February 8, 2006
Reply to Office Action of December 8, 2005

Pending Claims:

This listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Previously presented): A composite sheet comprising:

a substantially non-porous and moisture-permeable thermoplastic synthetic resin film having an upper and a lower surface;

a thermoplastic synthetic resin fibrous sheet bonded to at least one of the upper and lower surfaces of said thermoplastic synthetic resin film;

a plurality of bulgy structural zones formed on a surface of the thermoplastic synthetic resin film that is opposed to said thermoplastic synthetic resin fibrous sheet, the plurality of bulgy structural zones extending continuously in one direction in parallel and substantially uniformly spaced apart from one another; and

said thermoplastic synthetic resin film having substantially flat zones extending continuously between adjacent ones of the bulgy structural zones,

said thermoplastic synthetic resin film being welded along said bulgy structural zones to said thermoplastic synthetic resin fibrous sheet.

Appl. No. 09/941,096
Amdt. Dated February 8, 2006
Reply to Office Action of December 8, 2005

Claim 2 (Previously presented): The composite sheet according to Claim 1, wherein said thermoplastic synthetic resin film comprises a thermoplastic elastomer resin.

Claim 3 (Previously presented): The composite sheet according to Claim 2, wherein said thermoplastic elastomer resin is a member selected from the group consisting of urethane-based, ester-based and amide-based thermoplastic elastomer resins and said thermoplastic synthetic resin film is substantially non-porous and moisture-permeable.

Claim 4 (Previously presented): The composite sheet according to Claim 1, wherein said thermoplastic synthetic resin fibrous sheet comprises a fibrous nonwoven fabric made of thermoplastic synthetic resin fibers.

Claim 5 (Previously presented): The composite sheet according to Claim 4, wherein said fibrous nonwoven fabric comprises an elastically stretchable nonwoven fabric obtained by melt-spinning thermoplastic elastomer resin and said thermoplastic synthetic resin film is bonded along the bulgy structural zones to said elastically stretchable nonwoven fabric in an untensioned state.

Claim 6 (Previously presented): The composite sheet according to Claim 11, wherein each of said bulgy structural zones has a width of from about 0.2 to about 2.0 mm and a maximum thickness of

Appl. No. 09/941,096
Arndt. Dated February 8, 2006
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from about 40 to about 150 μm and each of said flat zones has a thickness of from about 5 to about 100 μm .

Claim 7 (Previously presented): The composite sheet according to Claim 1, wherein said composite sheet has a water-resistance of 49 hpa or higher as measured in accordance with JIS 1092A.

Claim 8 (Previously presented): The composite sheet according to Claim 1, wherein said composite sheet has a moisture-permeability of 3000 g/m²·24 Hr or higher as measured in accordance with JIS L 1099A.

Claim 9 (Previously presented): A composite sheet comprising:

a thermoplastic synthetic resin fibrous sheet;

a thermoplastic synthetic resin film bonded to the thermoplastic synthetic resin fibrous sheets to form a composite sheet having a substantially flat exposed surface defined by the thermoplastic synthetic resin film;

a plurality of bulgy structural zones formed on a surface of the thermoplastic synthetic resin film that is opposed to said thermoplastic synthetic resin fibrous sheet, the plurality of bulgy structural zones extending continuously in one direction in parallel and spaced substantially uniformly apart from one another; and

Appl. No. 09/941,096
Amdt. Dated February 8, 2006
Reply to Office Action of December 8, 2005

said thermoplastic synthetic resin film having substantially flat zones extending continuously between adjacent ones of the bulgy structural zones,

said thermoplastic synthetic resin film being welded along said bulgy structural zones to said thermoplastic synthetic resin fibrous sheet.

Claim 10 (Previously presented): A composite sheet comprising:

an imperforated thermoplastic synthetic resin film having an upper and a lower surface;

a thermoplastic synthetic resin fibrous sheet bonded to at least one of the upper and lower surfaces of said thermoplastic synthetic resin film;

a plurality of bulgy structural zones formed on a surface of the thermoplastic synthetic resin film that is opposed to said thermoplastic synthetic resin fibrous sheet, the plurality of bulgy structural zones extending continuously in one direction in parallel and spaced substantially uniformly apart from one another; and

said thermoplastic synthetic resin film having substantially flat zones extending continuously between adjacent ones of the bulgy structural zones,

said thermoplastic synthetic resin film being welded along said bulgy structural zones to said thermoplastic synthetic resin fibrous sheet.

Appl. No. 09/941,096
Arndt Dated February 8, 2006
Reply to Office Action of December 8, 2005

Claim 11 (Previously presented): The composite sheet according to Claim 1, wherein said plurality of bulgy structural zones have a cross sectional shape that comprises a flat portion and a curved portion that extends outward from the flat portion.

Claim 12 (Previously presented): The composite sheet according to Claim 11, wherein said plurality of bulgy structural zones are non-hollow.

Claim 13 (Previously presented): The composite sheet according to Claim 9, wherein said plurality of bulgy structural zones have a cross sectional shape that comprises a flat portion and a curved portion that extends outward from the flat portion.

Claim 14 (Previously presented): The composite sheet according to Claim 13, wherein said plurality of bulgy structural zones are non-hollow.

Claim 15 (Previously presented): The composite sheet according to Claim 10, wherein said plurality of bulgy structural zones have a cross sectional shape that comprises a flat portion and a curved portion that extends outward from the flat portion.

Claim 16 (Previously presented): The composite sheet according to Claim 15, wherein said plurality of bulgy structural zones are non-hollow.

Appl. No. 09/941,096
Amdt. Dated February 8, 2006
Reply to Office Action of December 8, 2005

Claim 17 (Previously presented): The composite sheet according to Claim 1, wherein said plurality of bulgy structural zones have solid cross sectional shapes that comprise opposed curved portions that extend outward from one another.

Claim 18 (Previously presented): The composite sheet according to Claim 9, wherein said plurality of bulgy structural zones have solid cross sectional shapes that comprise opposed curved portions that extend outward from one another.

Claim 19 (Previously presented): The composite sheet according to Claim 10, wherein said plurality of bulgy structural zones have solid cross sectional shapes that comprise opposed curved portions that extend outward from one another.